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DAG1 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP14101b

Product Information

Application	IHC-P, WB, E
Primary Accession	Q14118
Other Accession	Q28685, NP_001171107.1, NP_001171111.1, NP_004384.4
Reactivity	Human, Mouse
Predicted	Rabbit, Rat, Bovine, Canine
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB33752
Calculated MW	97441
Antigen Region	718-747

Additional Information

Gene ID	1605
Other Names	Dystroglycan, Dystrophin-associated glycoprotein 1, Alpha-dystroglycan, Alpha-DG, Beta-dystroglycan, Beta-DG, DAG1
Target/Specificity	This DAG1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 718-747 amino acids from the C-terminal region of human DAG1.
Dilution	IHC-P~~1:100~500 WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	DAG1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	DAG1 (HGNC:2666)
Function	The dystroglycan complex is involved in a number of signaling events and processes including laminin deposition and extracellular matrix assembly,

	acetylcholine receptor clustering, sarcolemmal stability, cell survival, peripheral nerve myelination, nodal structure, cell migration, epithelial polarization, and epithelium branching morphogenesis (By similarity). Required for the formation of photoreceptor ribbon synapses, and long-term maintenance of inhibitory synapses in cerebellar Purkinje cells (By similarity). Also involved in the positive regulation of cartilage formation through agrin (AGRN) binding and up-regulation of SOX9, a transcription factor that plays a key role in chondrocytes differentiation (PubMed:26290588). [Beta-dystroglycan]: Transmembrane protein that plays important roles in connecting the extracellular matrix to the cytoskeleton. Acts as a cell adhesion receptor in both muscle and non- muscle tissues. Receptor for both DMD and UTRN and, through these interactions, scaffolds axin to the cytoskeleton. Also functions in cell adhesion-mediated signaling and implicated in cell polarity.
Cellular Location	[Alpha-dystroglycan]: Secreted, extracellular space. Secreted, extracellular space, extracellular matrix, basement membrane {ECO:0000250|UniProtKB:Q62165} Synapse {ECO:0000250|UniProtKB:Q62165}. Note=Localized to inhibitory synapses in the cerebellar cortex. {ECO:0000250|UniProtKB:Q62165}
Tissue Location	Expressed in a variety of fetal and adult tissues. In epidermal tissue, located to the basement membrane. Also expressed in keratinocytes and fibroblasts.

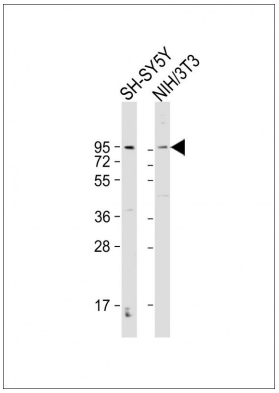
Background

Dystroglycan is a laminin binding component of the dystrophin-glycoprotein complex which provides a linkage between the subsarcolemmal cytoskeleton and the extracellular matrix. Dystroglycan 1 is a candidate gene for the site of the mutation in autosomal recessive muscular dystrophies. The dramatic reduction of dystroglycan 1 in Duchenne muscular dystrophy leads to a loss of linkage between the sarcolemma and extracellular matrix, rendering muscle fibers more susceptible to necrosis. Dystroglycan also functions as dual receptor for agrin and laminin-2 in the Schwann cell membrane. The muscle and nonmuscle isoforms of dystroglycan differ by carbohydrate moieties but not protein sequence. Alternative splicing results in multiple transcript variants all encoding the same protein.

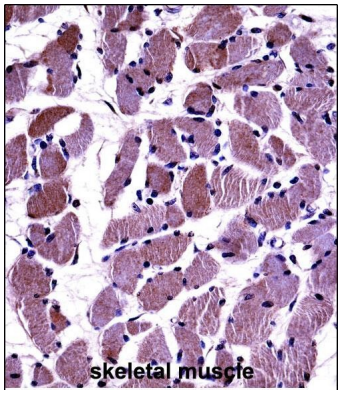
References

Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)
Nilsson, J., et al. Glycobiology 20(9):1160-1169(2010)
Lara-Chacon, B., et al. J. Cell. Biochem. 110(3):706-717(2010)
Sgambato, A., et al. Pathology 42(3):248-254(2010)
Masaki, T., et al. J. Biomed. Biotechnol. 2010, 740403 (2010) :

Images



All lanes : Anti-DAG1 Antibody (C-term) at 1:2000 dilution Lane 1: SH-SY5Y whole cell lysate Lane 2: NIH/3T3 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 97 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



DAG1 Antibody (C-term) (AP14101b)immunohistochemistry analysis in formalin fixed and paraffin embedded human skeletal muscle followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of DAG1 Antibody (C-term) for immunohistochemistry. Clinical relevance has not been evaluated.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.